

WHAT IS CLAIMED IS:

1. A hydraulic wheel system comprising:

a disc coupled to a drive shaft and being provided with a first cylinder and a second cylinder that communicate with each other and are filled with an operating fluid;

5 a first piston that is slidably disposed within the first cylinder such that the operating fluid moves to the second cylinder from the first cylinder in response to a movement thereof;

a wheel coupled to the disc so that a rotational force of the disc is transmitted to the wheel;

10 a tire coupled to the wheel;

a dismount button slidably coupled to the wheel and configured to move the first piston in response to a movement thereof; and

15 a wheel mounting member provided in the disc, a second piston that is slidably disposed within the second cylinder being integrated with the wheel mounting member so that the wheel mounting member is able to move in a predetermined direction in response to a pressure of the operating fluid in the second piston, the wheel mounting member being elastically supported by an elastic member in a direction opposite to the predetermined direction, the wheel mounting member being configured to be selectively connected to the wheel in response to a movement thereof.

20 2. The hydraulic wheel system of claim 1, wherein a hook is formed in the wheel, and a coupling protrusion that is configured to be connected to the hook is formed in the wheel mounting member.

25 3. The hydraulic wheel system of claim 1, wherein the elastic member supporting the wheel mounting member is a coil spring.

30 4. The hydraulic wheel system of claim 1, wherein the wheel mounting member is urged to move in a radially outward direction of the disc by the elastic member, and the wheel mounting member is urged to move in a radially inward direction of the disc in response to a force of the operating fluid in the second cylinder.

5. The hydraulic wheel system of claim 4, wherein the wheel mounting member is positioned where the wheel mounting member is coupled to the wheel, when the dismount button does not push the first piston.

5 6. The hydraulic wheel system of claim of claim 4, wherein the wheel mounting member is positioned where the wheel mounting member is separated from the wheel, when the dismount button pushes the first piston.

10 7. The hydraulic wheel system of claim of claim 3, wherein a spring receiving hole is formed in the wheel mounting member, and one end of the coil spring is inserted into the spring receiving hole.

8. The hydraulic wheel system of claim 7, wherein the other end of the coil spring is inserted into an insertion protrusion that is formed on the disc.

15 9. The hydraulic wheel system of claim 1, wherein at least one coupling pin is formed on a surface of the wheel, and at least one coupling hole into which the coupling pin is inserted is formed on the disc.

20 10. The hydraulic wheel system of claim 2, further comprising a disc cover that is coupled to the disc, wherein a through hole into which the hook of the wheel is inserted is formed on the disc cover.

25 11. The hydraulic wheel system of claim 10, wherein a receiving hole in which the wheel mounting member is disposed is formed on the disc, and wherein the disc cover is configured to cover a portion of the receiving hole to prevent the wheel mounting member from being separated from the receiving hole.

30 12. The hydraulic wheel system of claim 1, wherein the dismount button is elastically supported by a return spring against the wheel.

13. The hydraulic wheel system of claim 12, wherein the return spring

elastically supports the dismount button such that the dismount button is positioned to a position where the dismount button does not push the first piston.

5 14. The hydraulic wheel system of claim 1, wherein the dismount button is configured to be locked, and further comprising a dismount key being configured to unlock the dismount button.

 15. The hydraulic wheel system of claim 14, wherein the dismount key is a start key.